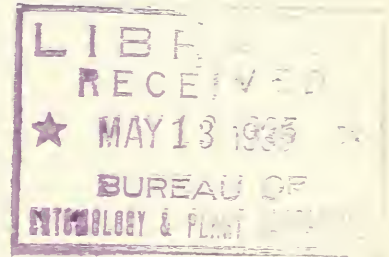


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THE INSECT PEST SURVEY
BULLETIN



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THE MORE IMPORTANT RECORDS FOR APRIL 1935

The lesser migratory grasshopper (Melanoplus mexicanus Sauss.) was hatching in large numbers in Arizona during the second week in April and was moving into alfalfa fields by the third week of the month. The clear-winged grasshopper started hatching in southern California during the second week in April.

Cutworms continued to be reported as serious pests throughout the South and northward to Delaware, Ohio, and Nebraska.

Flights of June beetles were observed during the third week in the month as far northward as Maryland, and the beetles were rather seriously damaging a variety of crops in Mississippi during the latter part of the month.

The chinch bug began scattering in hibernating quarters during the third week of the month, and by the last of the month flights were reported from Indiana, Illinois, Kansas, and Oklahoma.

During the last of March and the first week of April outbreaks of the green bug were reported from Georgia.

The hessian fly is reported as occurring in large numbers in northeastern Oklahoma on wheat sown early for grazing. A heavy infestation in volunteer wheat is also reported from Ohio.

The successful hibernation of the corn ear worm at Arlington Farm, near Washington, D. C., was reported during the month.

The clover leaf weevil was reported as injuriously abundant in Ohio, Kentucky, and Kansas.

An outbreak of the pea aphid in alfalfa in southern California was reported very late in March, and during April serious damage to peas was reported from the San Francisco Bay district of California, and indications of trouble from this insect were also reported from Nevada.

The codling moth began to emerge in numbers about the middle of April in Georgia. Pupation was well under way in Ohio, Illinois, Missouri, and Washington during the month.

During the first week in the month the plum curculio began to emerge from hibernation in Virginia and by the end of the month it was collected in considerable numbers. In South Carolina, Georgia, and Alabama the infestation is much heavier than it has been for several years.

More than half of the oriental fruit moth larvae had pupated by April 20 in Delaware, and adult moths were collected in the orchards on April 23 in southern Virginia. Twig injury was observed in the Fort Valley section of Georgia during the first week in April. Twig injury was also observed during the month in Mississippi.

Considerable damage by pear thrips was reported early in the month from Oregon and California.

This year the vegetable weevil was found in the coastal-plain area of South Carolina, where it had not been known to occur previously.

The Colorado potato beetle is apparently much more prevalent than usual in the Gulf and South Atlantic States, from Alabama to South Carolina.

The first adult of the Mexican bean beetle was observed on April 22 at Experiment, Ga. In the northern States (Delaware and Ohio) winter mortality was very heavy.

The pepper weevil is appearing in unprecedented numbers in parts of southern California.

The tobacco flea beetle is seriously affecting tobacco plant beds along the Atlantic seaboard from Florida to Maryland.

Heavy infestations by the forest tent caterpillar are expected in the northern New England States, and a very heavy infestation by this pest was reported from the Gulf coast counties of Mississippi during the month.

Reports of screw worm infestations of livestock are being received in increasing numbers from Georgia, Florida, and parts of Texas.

Termite damage is being reported from an unusual number of properties in the Northern States, extending from Long Island, N. Y., and Delaware westward to Nebraska.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

Georgia. O. I. Snapp (April 9): Grasshoppers, mostly Schistocerca americana Drury, are moderately abundant on grass in pastures at Fort Valley.

Florida. F. L. Chamberlin (April 1): Rather heavy infestations of newly emerged grasshoppers have been observed attacking tobacco during the past few days in Gadsden County.

Arizona. C. D. Lebert (April 10-15): Tiny hoppers of Melanoplus mexicanus Sauss. were noticed by the thousands in fence rows and on ditch banks along an old field of oat stubble near Buckeye on April 10. By April 15 they had crossed the road to an alfalfa field.

California. S. Lockwood (April 25): The clear-winged grasshopper (Camnula pellucida Scudd.) started to hatch in large numbers along the coast of San Diego County on April 10 and in the mountainous area on April 17.

CUTWORMS (Noctuidae)

Delaware. L. A. Stearns (April 10): Slight injury reported in connection with some 600,000 pepper plants under glass at Bridgeville.

South Carolina. W. C. Nettles (April 20): Cutworms are bad in tobacco seedbeds in eastern Carolina.

Georgia. O. I. Snapp (April 5): Cutworms are more abundant than usual and we have received many complaints of damage to gardens and annual flowers at Fort Valley. They have also cut down many little peach trees in our nursery.

Ohio. T. H. Parks (April 24): Complaints were received during the first part of April that a cutworm has been injuring tomato plants in greenhouses near Cleveland. It climbs the plants at night and cuts off the terminals.

Tennessee. G. M. Bentley (April 24): Noctuid moths are active and cutworms are moderately abundant.

Alabama. J. M. Robinson (April 20): Cutworms continue to be active and are attacking vegetables.

Mississippi. C. Lyle and assistants (April 23): Cutworms have been causing considerable damage to young vegetable plants in Jackson and Harrison Counties. The greasy cutworm (Agrotis ypsilon Rott.) was observed causing severe damage to tomatoes at Clarksdale.

Missouri. L. Haseman (April 26): A few moths of the greasy cutworm (A. ypsilon) were observed from April 20 to 22. Last night great swarms of the moths appeared on apple blossoms at Columbia.

Nebraska. M. H. Swenk (April 20): A report received from Frontier County on April 15 stated that cutworms were taking the wheat in some spots. An abundance of pupae of the army cutworm (Chorizagrotis auxiliaris Grote), chiefly in old alfalfa and cornfields, was reported from Nuckolls, Keyapaha, Furnas, Hayes, and Gosper Counties from March 25 to April 5.

Kansas. H. R. Bryson (April 27): Cutworms were reported by E. G. Kelly on April 5 to be damaging alfalfa, sweetclover, and some wheat in Clay County, and moving from grasslands to wheat and alfalfa in Ottawa County. On a 50-mile drive, 12 alfalfa fields and 14 wheat fields visited in Republic County showed a population of from 1 to 8 cutworms per plant.

H. H. Walkden (March): Pupae of Scotogramma trifolii Rott., dug out of soil late in February at Manhattan, yielded adults on March 13. This species is ordinarily scarce in eastern Kansas, and the writer has never taken overwintering pupae previously. (April 19): Larvae of Feltia subgothica Haw. were sufficiently abundant in Jackson County to cause some injury to alfalfa in local areas.

Texas. K. P. Ewing (April 13): Cutworms have done considerable damage in places in Calhoun County. The greatest damage noted thus far was the destruction of approximately 300 acres of cotton, out of a block of 700 acres. The entire acreage was planted in pedigreed seed costing \$2 per bushel. On this one farm the loss was about \$750. On many small acreages, of 15 acres or less, this insect has destroyed the stand of cotton.

Utah. G. F. Knowlton (April 2): Cutworms are damaging range plants on Promontory Ridge, from 15 to 25 per square foot being found. They are also present in damaging numbers at Promontory and at Promontory Point, in Box Elder County. Euxoa (Chorizagrotis) sp. auxiliaris group are damaging dry-farm wheat at East Promontory. (Determined by C. Heinrich.)

ARMYWORM (Cirphis unipuncta Haw.)

Missouri. L. Haseman (April 26): The epidemic of armyworms, reported in March from southwestern Missouri, began emerging as moths in breeding cages about April 10, and between April 15 and 20 a few moths came to lights at Columbia. On April 22 swarms of moths appeared on fruit blooms at Mount Vernon, and on April 25 swarms appeared on apple blossoms at Columbia. The armyworm seems to have been thrown out of its normal cycle by last summer's drought, for we had an outbreak of worms in southern and central Missouri late last fall, and we have already a matured crop of them doing considerable damage in southern

Missouri. The swarms of moths appearing at Columbia recently may be migrants or they may have matured from unobserved early spring brood worms locally, as the moths in central Missouri last fall oviposited and the worms were partly developed before winter set in; however, no complaints of serious damage from the worms in the central part of the State this spring have been reported to us.

BEEET WEEWORM (Loxostege sticticalis L.)

Kansas. H. H. Walkden (April): A heavy flight of adults occurred at Hays on April 22, approximately 6,000 specimens being taken at the trap light. These are, no doubt, adults of the fall generation, the larvae of which caused such widespread injury to Russian-thistle last fall.

MONARCH BUTTERFLY (Danaus menippe Hbn.)

Maryland. J. A. Hyslop (April 30): The first adult of this year was observed flying about a lilac hedge on my farm at Avenel.

WHITE GRUBS (Phyllophaga spp.)

Pennsylvania. H. E. Hodgkiss (April 22): White grubs were reported abundant in newly plowed ground in Bedford County on April 15.

Maryland. J. A. Hyslop (April 27): The first adults of the season were collected on my farm at Avenel. The night was warm and cloudy, followed by rain. In Silver Spring the flight was so heavy as to interfere with a motion picture performance.

South Carolina. W. C. Nettles (April 20): White grubs attacking lawns have been observed several times.

Minnesota. A. A. Granovsky (April 22): White grubs are still quite deep in the soil, ranging from 16 to 26 inches below the surface, according to our last digging, made April 10. The adults are close to the surface, usually within 2 or 3 inches of it. From the information on hand, we expect a rather heavy flight of brood A June beetles and moderately severe injury from white grubs of brood C. Brood B is very unimportant economically in most sections of the State.

Iowa. H. E. Jaques (April 23): We are beginning to find a goodly number of May beetles.

Kansas. H. R. Bryson (April 23): Adults have been slow in coming to lights, owing to the low night temperatures. White grubs are less abundant in the soil than usual.

Oklahoma. F. A. Fenton (April 23): The first early May beetle was observed March 26. Most of the specimens have been identified as P. calceata Lec.

E. Hixson (March 26): One male of P. crassissima Blanch. and 38 males and 4 females of P. calceata were collected at a trap light at Stillwater today.

Mississippi. C. Lyle and assistants (April 23): Pecans, roses, and other plants in all sections of the State have been more or less injured by May beetles during the past month. One large batch of specimens received from Yazoo County represented two species--P. congrua Lec. and P. crenulata Froel. On April 23 A. L. Hamner collected at lights at State College 45 specimens of P. calceata Lec., 10 males of P. fraterna var. mississippiensis Davis, 4 males of P. tristis Fab., and 1 male of P. bipartita Horn.

E. W. Dunnam (April 26): It has been noted that May beetles appeared scarce in the vicinity of Leland, an hour's search around strong lights yielding only a dozen beetles.

Texas. E. W. Laake (April 22): It has been reported to this office that 50 percent of the red oak, 50 percent of the post oak, 10 percent of the blackjack oak, 20 percent of the elm, and 20 percent of the sweetgum in Gregg, Rusk, Harrison, Panola, and Upshur Counties, have been partly or wholly defoliated by May beetles.

GREEN JUNE BEETLE (Cotinis nitida L.)

South Carolina. W. C. Nettles (April 20): Green June beetle larvae are reported as abundant in tobacco seedbeds in the eastern part of the State.

Illinois. C. L. Metcalf (April 1): We have a report of the green June beetle occurring by the thousands in gardens and lawns in West Frankfort, Franklin County.

Alabama. J. M. Robinson (April 20): Strawberries at Auburn are being attacked by larvae of the green June bug.

WIREWORMS (Elateridae)

Kentucky. W. A. Price (April 26): Undetermined species of wireworms have been received from several places in the State during the past few days.

Alabama. J. M. Robinson (April 20): At Auburn strawberries are being attacked by wireworms.

California. S. Lockwood (April 19): Considerable damage to buds of prune trees has occurred along the Consumnes River in Sacramento County. The insects collected from the buds were as follows: Click beetles, Pheletes canus Lec. and Cardiophorus stigmaticus Cand., and the chrysomelid Lema nigrovittata Guer.

M. W. Stone (April 20): An 18-acre field of young sugar beets at Wintersburg was so severely damaged by the sugar beet wireworm (P. californicus Mann.) that it was necessary to replant the entire area.

A CHINCH BUG (Blissus hirtus Montd.)

Ohio. J. S. Houser (April 22): The hairy chinch bug (B. hirtus) has hibernated successfully in lawns in Cleveland and bids fair to continue this season as a destructive lawn pest.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT AND OTHER SMALL GRAINS

HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (April 24): Volunteer wheat in a 200-acre field in Madison County is heavily infested. Last year much of the grain was shattered in the harvesting process. The adults have not emerged. The entire field is being plowed under to protect uninfested wheat.

Oklahoma. C. F. Stiles (April 24): Several reports have been received during the past few days from county agents from the northeastern part of Oklahoma, stating that the hessian fly is present in large numbers. The wheat was sown early last fall for grazing. Farmers are planning to harvest the grain, should any be produced.

CHINCH BUG (Blissus leucopterus Say)

Ohio. T. H. Parks (April 24): A survey of six western Ohio counties early in April shows far more than the usual numbers of overwintering chinch bugs present in clumps of timothy. Seneca, Hancock, and Wyandot Counties average between 60 and 75 bugs per square foot area. Bluegrass harbors very few bugs, but many are found on the floor of woods. Winter mortality has been from 12 to 14 percent.

Indiana. C. M. Packard (April 27): Considerable chinch bug flight from hibernation quarters to small grain fields has occurred during the past few days at La Fayette.

Illinois. W. P. Flint (April 23): There has been no general movement of chinch bugs from hibernating quarters into the small grains. The bugs have scattered considerably in the hibernating quarters, but no change of any significance has occurred. From 14 to 16 percent of the bugs died during the winter, which is higher than usual. (April 30): A general movement out of winter quarters started on April 23, continuing to the present time, with a strong movement on the 28th. From 65 to 75 percent of the bugs have now left winter quarters, 50 percent having settled in small grains.

Iowa. C. J. Drake (April 27): Very few chinch bugs have been observed in flight in southern Iowa. The bugs are quite active and can be found crawling around in their hibernating quarters or in grassy areas near favorable hibernating situations. On the whole, the population is much higher than it was last year. About 80 counties are infested.

H. E. Jaques (April 27): Chinch bugs have come through the winter in large numbers.

Missouri. L. Haseman (April 22): No considerable numbers of chinch bugs have left winter quarters in central Missouri.

Kansas. H. R. Bryson (April 20): Chinch bugs are to be found in small-grain fields but are not as plentiful as last year. Reports from Republic, Neosho, Crawford, and other counties indicate a much lighter population than last year.

W. T. Emery (March): A late February survey to determine abundance revealed a decrease in population in northeastern Kansas, from an average of 45 to 10 bugs per square-foot sample. However, in southeastern Kansas the population remained stationary. On March 14, 17 sorghum stubbles contained 44 chinch bugs, or an average of 2.6 each, while 24 kafir stubbles showed 12 bugs, or an average of 0.5 each. On March 25, 6 adults were caught on flight screens set up at Manhattan.

Oklahoma. F. A. Fenton (April 23): Unusually warm weather on March 25 caused an early emergence from hibernation and flight to small grains. At Lawton this movement seems to have been complete, whereas at Stillwater there were still a few bugs in hibernation until the middle of April.

C. F. Stiles (April 24): Chinch bugs are not showing up in very large numbers in northeastern Oklahoma. However, we are expecting a severe outbreak should weather conditions be favorable in the next 2 months.

GREEN BUG (Toxoptera graminum Rond.)

Georgia. T. L. Bissell (April 1): An oat field at Experiment has been badly damaged by aphids. Several patches from 15 to 40 feet across were killed. There are now very few living lice. Many aphids are parasitized. Coccinellid larvae are moving on ground for lack of food. Few aphids on adjoining wheat field, but no plants were killed. I have heard of two similar outbreaks in the vicinity, both on fall-sown oats.

CORN

CORN EAR WORM (Heliothis obsoleta Fab.)

Virginia. F. F. Dicke (March): An area of approximately 200 square yards

at the Arlington Farm devoted to late sweet corn was examined late in March to determine to what extent the corn ear worm had survived the winter. This area yielded a total of 79 pupae, 60 of which, or 76 percent, were living. Since considerable mortality occurs normally in the early pupal stage, it is evident that the mortality during the winter was unusually low. There was no significant difference between the depths at which the living and dead pupae were found. Although below-zero temperatures occurred the ground was well protected by snow from frost penetration.

Louisiana. W. E. Hinds (April 27): Eggs are abundant in many fields of early corn and also on tomatoes.

Texas. F. L. Thomas (March 23): First adults were observed on March 7 at Dickinson by J. N. Roney. First adults emerged at College Station on March 23.

SALT-MARSH CATERPILLAR (Estigmene acrea Drury)

Florida. J. R. Watson (April 23): The salt-marsh caterpillar has been very destructive to corn during the past month, particularly in Alachua and adjoining counties.

Texas. J. N. Roney (March 26): Many second-instar and third-instar larvae of the salt-marsh caterpillar were found on turnips, corn, cabbage, and beets.

SOUTHERN CORN ROOT WORM (Diabrotica duodecimpunctata Fab.)

South Carolina. F. Sherman (April 20): Damage by the southern corn root worm reported, chiefly from eastern South Carolina.

Louisiana. C. E. Smith and P. K. Harrison (April): Injury to corn at Baton Rouge was first noticed March 30. On April 1 corn growing on the experimental plots at Louisiana State University was being injured by the larvae. On April 8 the first spring-brood beetles, apparently several days old, were observed in the field.

CORN BILLBUGS (Calendra spp.)

South Carolina. W. C. Nettles (April 20): Some complaint of damage by billbugs reported from eastern South Carolina.

Florida. J. R. Watson (April 23): Billbugs were sent in from Clay County where they were reported to be doing serious injury to corn.

CLOVER

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

Ohio. T. H. Parks (April 24): I was called to see a severely injured

alfalfa field in Franklin County on April 1. Injury still continues. Such outbreaks in Ohio are usually spotted and very local.

Kentucky. W. A. Price (April 26): The clover leaf weevil is very abundant over the State. Many specimens have been received from the vicinities of Maysville, Shelbyville, Glasgow, Elizabethtown, and Lexington.

Kansas. H. R. Bryson (April 15): The clover leaf weevil is abundant in some alfalfa fields in Franklin County and is doing some injury to leaf buds.

COMMON RED SPIDER (Tetranychus telarius L.)

Louisiana. H. A. Jaynes (March 28): A large amount of clover in Houma is infested by a red spider, evidently T. telarius. One field of vetch was very heavily infested.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

California. A. E. Michelbacher (April 20): In the San Joaquin Valley the alfalfa weevil is somewhat more abundant than a year ago. In one field at Vernalis on April 19 an average of 1,672 larvae were taken per 100 sweeps of an insect net. Some damage has been done in this field. On April 10 the average number of larvae collected per 100 sweeps was 1,000. The next highest average larval count was 676. In other infested fields in the San Joaquin Valley the counts have been low, in many fields below 100. Apparently the weevil will not be of any economic importance. In the Pleasanton area the highest average larval count up to April 12 was 357 per 100 sweeps. Counts much higher can be expected later on, as owing to a great deal of cold weather, there are a number of fields where the first crop of alfalfa is only about half grown. In the Niles area the highest count on April 12 was slightly less than 1,000 larvae per 100 sweeps. In this area all fields are ready to be harvested.

PEA APHID (Illinoia pisi Kalt.)

Kansas. H. R. Bryson (April 15): Very few pea aphids are to be found in the State. In no instance do they occur in sufficient numbers to cause damage. Aphids have been found in alfalfa fields in Franklin, Riley, Clay, and Republic Counties. None were found in Neosho and Crawford Counties.

E. T. Jones (April 20): Fourteen alfalfa fields in six eastern counties examined during the third week in April averaged 182 aphids per 100 sweeps. Similar sweepings made on March 17 yielded no infestation. An unusually large number of the usual insect predators of aphids were found in all fields.

Arizona. T. P. Cassidy (April 27): Reports were received during the past week from Sacaton and the Salt River Valley that plant lice were causing serious damage to alfalfa. Inspections made in several alfalfa fields in the Salt River Valley showed the infestation to be very heavy, as literally thousands of plant lice could be collected in a net by sweeping the plants a few times.

Nevada. R. A. Blanchard (March): Periodic observations in western Nevada indicate the possibility of an outbreak of the pea aphid. The relatively mild and early spring weather has allowed viviparous forms to survive in small numbers. During normal years winter temperatures are low enough to destroy green growth, preventing the aphids from passing the winter in any but the egg stage. The fields in the vicinity of Reno had green growth from 1/2 inch to 2 inches tall on March 28, and examination in six fields showed populations ranging from 4 to approximately 300 aphids per five-clump sample.

Oregon. L. P. Rockwood (April 10): This species averaged 59 aphids per 100 sweeps in a field of alfalfa on high ground, showing good spring growth at New Era. Many were quite small and there were no alates. (April 13): In the Willamette Valley early fall-sown vetch, seeded in August or September, as cover crops, showed moderate infestations, as many as 350 aphids per 100 sweeps in some cases. Vetch fields, for hay or seed, seeded in October showed very few or no aphids. Two alates were swept from August-sown vetch, but none from October vetch. Coccinellid beetles, particularly Hippodamia convergens Guer., are becoming abundant in vetch fields. H. quinquesignata obliqua Csy. and H. sinuata souria Lec. began leaving their hibernation cache on April 11 and are increasing in vetch fields.

California. R. A. Blanchard (March): An outbreak on alfalfa appears probable in the Antelope Valley of southern California. The severity of this will depend upon weather conditions during the early part of April. The populations are building up later than usual. There seems to be some correlation between this condition and the fact that very few severe frosts occurred during the early spring to prune back the alfalfa growth. The average temperature, however, has been sufficiently low to allow only slow growth of the plants. Such slow steady growth has been observed previously to result in slow accumulation of aphids, whereas periods of higher temperatures interspersed with frosts have resulted in early infestations. The late infestations have been observed to affect the alfalfa more adversely and cause a larger total loss of hay than did infestations that occurred before the alfalfa had begun to make sustained growth.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana. W. E. Hinds (April 27): Moths began emerging from overwintered larvae, in some numbers, following the rising of mean temperatures to

about 70° F., about the first week of April. Eggs from these moths hatched and first-stage and second-stage larvae were causing characteristic perforations in leaves of corn and cane by the third week of April. The most advanced larval stage that could be found in the southern part of the cane belt up to April 24 was the fourth, most of the larvae in corn then being in the second and third stages, while those in cane were in the first and second stages. Mortality among young larvae has been very high in cane, especially throughout April. Apparently the numbers developing in the first generation will be less than usual. Trichogramma minutum Riley has not been taken in cane borer eggs this season, but has been bred from eggs of Heliothis obsoleta Fab. The first parasitized egg was collected on April 5 at Baton Rouge, and from it three parasites emerged on April 15. Another egg, collected on April 12, produced three parasites on April 23.

SUGARCANE BEETLE (Euethiola rugiceps Lec.)

Louisiana. W. E. Hinds (April 27): Adults were in flight in some numbers at Baton Rouge on the night of April 5, following a cloudy day with maximum temperature at 80° F., with still air in the evening. The temperature ranged from 73° at 6 p.m. to 70° at midnight.

F R U I T I N S E C T S

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

Delaware. L. A. Stearns (April): Four percent of overwintered larvae pupated on April 20; 22 percent mortality for cage material.

Georgia. C. H. Alden (April 20): Adults were emerging in large numbers from insectary bands on April 19 and were also being caught from bait traps in orchards. The first adult was caught on April 1 at Cornelia.

Ohio. T. H. Parks (April 24): Larvae are very abundant under loose bark of tree trunks in the worst infested orchards. Few have been killed by birds this winter. Pupation has started, and we look for a heavy emergence from overwintered larvae.

Illinois. W. P. Flint (April 23): The codling moth has pupated generally throughout the southern part of the State. No emergence is expected before about the first of May.

Minnesota. A. G. Ruggles (April 22): Many codling moth larvae killed during the winter around Minnetonka district and University Farm at Saint Paul.

Missouri. L. Haseman (April 22): Over 50 percent pupation in southeastern Missouri by April 15, less in the southwestern part, and about 2 percent at Columbia to date. No moths are out.

Washington. E. J. Newcomer (April 22): In the Yakima Valley larvae have been pupating for some time and adults will probably begin emerging about May 10. This is about 4 weeks later than last year. Fruit trees are blooming about that much later this season.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

New Hampshire. L. C. Glover (April 23): On April 21 egg masses of the eastern tent caterpillar were hatching.

Vermont. H. L. Bailey (April 25): Egg masses are from scarce to moderately abundant in the vicinity of Burlington. A very few have hatched, but are still clinging to egg masses. They are more plentiful in the southern half of the State.

Massachusetts. J. V. Schaffner, Jr. (April 19): One hundred and five egg clusters of the eastern tent caterpillar were examined for hatching at Melrose on April 19, and of these two clusters each had one larva freshly emerged. Egg clusters are abundant in the vicinity.

Connecticut. E. P. Felt (April 23): At Stamford, eggs of the apple tree tent caterpillar have hatched in considerable numbers, with every indication that there will be an extraordinary abundance of the pests.

M. P. Zappe (April 22): In New Haven County eggs have hatched and young larvae are feeding on opening buds of apple, peach, and wild cherry.

New York. N. Y. State Coll. Agr. News Letter (April): Tent caterpillars are reported as abundant on Long Island and in the Hudson River Valley. Hatching was observed early in the month throughout this region.

Delaware. L. A. Stearns (April): In Newark the first hatching occurred on April 1. Nests were first generally visible on April 17.

Pennsylvania. T. L. Guyton (April 23): The eastern tent caterpillar hatched the first and second week of April and now forms conspicuous tents on favored plants in Cumberland, Perry, Juniata, Lancaster, and Dauphin Counties. It is probably present in most of the counties in the eastern half of the State.

H. N. Worthley (April 22): Eastern tent caterpillar eggs hatched during warm weather from April 19 to 21 at State College. Nests are just becoming visible in the crotches of unsprayed apple trees.

Maryland. E. N. Cory (March 26): The eastern tent caterpillar has begun to emerge at College Park.

Georgia. O. I. Snapp (April 13): This insect is considerably more abundant at Fort Valley this year than usual. Perhaps the heaviest infestation ever observed in a peach orchard was recorded on March 25. Eggs were hatching the middle of March and practically full-grown larvae were observed on April 13.

W. F. Turner (April 3): I noticed what seemed to be a particular abundance of tent caterpillar tents on wild cherry and wild crab apple in Bibb, Jones, and Baldwin Counties.

Tennessee. G. M. Bentley (April 24): Very abundant. I have never seen as many on wild cherries and unsprayed apple trees.

Kansas. H. R. Bryson (April 27): On April 16, many wild plum and cherry trees were infested with small tents in Crawford and Neosho Counties.

RIBBED COCOON MAKER (Bucculatrix pomifoliella Clem.)

New Hampshire. L. C. Glover (April 23): This insect was reported as rather common on apple trees in Rockingham County.

APPLE APHIDS (Aphidae)

Vermont. H. L. Bailey (April 25): Eggs of the green apple aphid (Aphis pomi DeG.) are generally scarce, in Grand Isle and Chittenden Counties. An occasional tree with many water sprouts found heavily infested. No eggs hatched.

Connecticut. P. Garman (April 22): Apple aphids, A. pomi, are generally scarce at the present time in New Haven County. Unfavorable weather doubtless reduced the population. No rosy aphid (Anuraphis roseus Baker) observed to date.

M. P. Zapoe (April 22): Eggs of the green apple aphid have been hatching for several days and aphids are present on buds in New Haven County.

New York. N. Y. State Coll. Agr. News Letter (April): Apple grain aphids (Rhopalosiphum prunifoliae Fitch) began hatching during the last week in March and the first week in April. Rosy apple aphids were seen hatching in Ulster County during the first week of the month and were reported from other counties in the Hudson River Valley later in the month. Toward the end of the month A. pomi was appearing in about normal numbers. In western New York the three species were found in considerable numbers by the last week in April, indicating that hatching is almost completed.

Pennsylvania. H. E. Hodgkiss (April 22): Rosy apple aphid eggs hatched in Washington and Allegheny Counties on March 28, in Franklin County on March 29, and in Adams County on March 30. Green apple aphid eggs were hatching in fairly good numbers on these dates with many in the second

instar. Apple grain aphid eggs hatched along with the green aphid, with many in the third instar when the early apple buds opened. The general condition up to April 19 was, for rosy aphids, generally spotted; for green and grain aphids, plentiful but not as many as in most years. The exact situation as regards the extent of rosy aphid infestation could be determined by April 19.

H. N. Worthley (April 22): At State College, apple aphids were moderately abundant on apple. On April 15, observations showed 6.6 aphids per bud (200 buds); on April 18, 4.2 aphids per bud (200 buds). Temperature went to 19° F. on April 16 and the cold weather killed 36 percent of the aphids. The apple buds are now nearly in the pre-pink stage and of the aphids present, 93 percent are green aphids and 7 percent grain aphids. No rosy aphids have been seen to date.

Delaware. L. A. Stearns (April): Eggs of the grain aphid have hatched and were generally abundant on apple on April 2.

Virginia. W. J. Schoene (April 24): Eggs of apple aphids hatched at Winchester as follows: Grain aphid on March 17, apple aphid on March 20, rosy aphid on March 23. No injury has been reported except in small unsprayed orchards.

Ohio. W. H. Parks (April 24): Stem mothers of the apple grain aphid are now giving birth to second-generation young at Columbus. The freeze of April 16 apparently killed very few aphids, although the temperature descended to 22° F. Apple trees are approaching the full-pink stage.

Missouri. L. Haseman (April 23): In the early part of the month some apple grain aphids were observed on buds in central Missouri, but by the last of the month only a few had appeared.

Mississippi. C. Lyle and assistants (April 23): The apple aphid was reported as moderately abundant in the vicinity of Wiggins. Some colonies were being heavily parasitized.

Oregon. D. C. Mote (April 13): Rosy aphids were reported by B. G. Thompson on apple at Monroe.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Delaware. L. A. Stearns (April 3): Some infestation of 2-year-old apple trees in Bridgeville; three trees dead.

Georgia. O. I. Snapp (April 3): Larvae of the twice-stabbed ladybeetle (Chilocorus bivulnerus Muls.) preying on the scale, are unusually abundant at Fort Valley. J. R. Thomson reports as many as 60 larvae on a scale-infested peach twig 12 inches long and 1 inch in diameter, the largest population of this predacious insect he has ever observed in a single peach tree.

Tennessee. G. M. Bentley (April 24): The San Jose scale is moderately abundant.

Alabama. J. M. Robinson (April 20): The San Jose scale is moderately abundant on peaches and apples.

FLAT-HEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Nebraska. M. H. Swenk (April 20): The flat-headed apple tree borer was reported working in either apple or walnut trees in Furnas, Saunders, Butler, Douglas, and Custer Counties from April 2 to 12.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Vermont. H. L. Bailey (April 25): Eggs of the European red mite are from scarce to moderately abundant, with a high percentage of apparent winter kill, in Grand Isle County.

Pennsylvania. H. E. Hodgkiss (April 22): The European red mite egg infestation is rather general through the State. Infestations in individual orchards are not heavy.

PEACH

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Delaware. L. A. Stearns (April 24): No emergence of curculio from hibernation as yet.

Virginia. W. J. Schoene (March 24): Two plum curculios were taken at Crozet on April 5. No more were collected until April 23, when considerable numbers were taken.

South Carolina. F. Sherman (April 20): The plum curculio is worse than usual.

Georgia. O. I. Sharp (April 2): Large numbers of adults appeared from hibernation during the last four days in Fort Valley. A total of 736 curculios were jarred from 164 peach trees this morning, which is an average of 4.5 beetles per tree. An average of 9 beetles per tree were jarred from trees in several sections of the orchard. This indicates that the infestation is very much heavier than for several years. Weather conditions have been favorable during the last week to bring the curculios out of hibernation. An average of 1.05 beetles per tree were jarred from the trees on March 29 and, as the average caught this morning was 4.5 beetles per tree, the arrival in the orchards between those dates was very heavy. (April 3): Eggs nearly ready to hatch were found in little peaches today. Oviposition began fully 2 weeks earlier than last year. Adults are so abundant that it is easy to find them on the trees and on the ground under the trees.

(April 18): The first larvae of the season were found in green peaches on April 6. They were 3 or 4 days old. Eggs began to hatch 3 weeks earlier than last year. Larvae began to leave peach drops this year on April 14, which is 3 weeks earlier than last year (May 7). There is every prospect of a serious second brood this season.

C. H. Alden (April 20): First adults were caught on March 23 at Cornelia. On March 27, 103 beetles were caught from six peach trees, the highest number ever recorded from this district. Cold weather has delayed egg deposition, however, and to date only a few egg punctures have been noted.

Illinois. W. P. Flint (April 23): The plum curculio is very scarce, judging from jarring records made by C. S. Chandler in southern Illinois.

Missouri. L. Haseman (April 22): Have taken no curculios at Columbia, and in the southern part of the State, where peaches are cracking their collars, none have been observed.

Alabama. J. M. Robinson (April 20): The peach curculio is more abundant than usual in central Alabama.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Delaware. L. A. Stearns (April): Sixty-five percent of overwintered larvae pupated April 20; 46 percent mortality for cage material.

Virginia. W. J. Schoene (April 24): Adult peach moths were taken in numbers in bait-pails in orchards near Roanoke and Crozet on April 23.

Georgia. O. I. Snapp (April 3): The first twig injury of the season was observed today at Fort Valley. The larvae in the twigs were about 4 days old. The eggs began to hatch on March 30, which is earlier than usual and, as a result, the maximum number of generations (six and partial seventh) is expected this year. The dates of first twig injury other years are as follows: April 10, 1925; April 20, 1926; April 1, 1927; April 25, 1928; April 4, 1929; April 29, 1930; April 22, 1931; May 17, 1932; April 20, 1933, and April 24, 1934.

C. H. Alden (April 20): The first adult was caught in the bait traps at Cornelia on April 8. No twig injury has been noted to date.

Mississippi. C. Lyle (April 23): Correspondents at Mount Olive and New Albany recently sent to this office peach twigs which had evidently been injured by larvae of this species, stating that the damage was quite noticeable. Considerable injury to peach trees has also been recently observed at State College.

PEACH BORER (Aegeria exitiosa Say)

Georgia. O. I. Snapp (April 20): Growth of peach borer larvae in Fort

Valley was resumed in peach trees during the last 5 weeks because of feeding, owing to warmer weather. There has been no oviposition to date under orchard conditions.

LESSER PEACH BORER (Aegeria pictipes G. & R.)

Georgia. O. I. Snapp (March 29): Moths of the spring brood are now on wing in Fort Valley. As usual, the infestation is heavy in neglected orchards and those in which there are trees with injured areas.

Ohio. T. H. Parks (April 24): Injury is very severe in a large commercial peach orchard near Columbus. Control is in progress this week.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

Connecticut. P. Garman (April 22): The pear psylla first appeared in New Haven County in numbers on the trees on April 19. Egg deposition started almost immediately.

New York. N. Y. State Coll. Agr. News Letter (April): The first pear psyllas to be observed were seen on March 6 in Orange County. Flies were generally abundant in the Hudson River Valley during the last week in March and the first week in April, with about normal egg laying. During the second week of April egg laying was very general over the Hudson River Valley, and during the third week similar reports were received from western New York.

PEAR THRIPS (Taeniothrips inconsequens Uzel.)

New York. N. Y. State Coll. Agr. News Letter (April): The first pear thrips of the season were observed on April 5 in Ulster County. They seemed to be generally scarce over the eastern part of the State.

Oregon. S. C. Jones (April): Adults are blasting pear buds in Willamette Valley, doing serious damage. Emerged March 14; oviposition April 6.

California. S. Lockwood (April 6): Pear thrips are doing considerable damage to opening pear buds in a small orchard in Scott's Valley in Lake County. This is the second year that this insect has been known to exist in Lake County.

CHERRY

BLACK CHERRY APHID (Myzus cerasi Fab.)

New York. N. Y. State Coll. Agr. News Letter (April): Eggs began hatching during the first week of the month in the Hudson River Valley and also in the Lake area. This aphid seems to be scarce.

PLUM

A SAWFLY (Hoplocampa cookei Clarke)

California. S. Lockwood (April 23): On April 17, larvae of this sawfly were found doing considerable damage to young plums near Winters, in Yolo County.

GRAPE

GRAPE LEAFHOPPER (Erythroneura comes Say)

Minnesota. A. A. Granovsky (April 22): The grape leafhoppers overwintered in large numbers and are readily found in vineyards and gardens in proximity of wild or cultivated hosts.

GRAPE SCALE (Aspidiotus uvae Comst.)

Kentucky. W. A. Price (April 26): The grape scale is found commonly on grape vines and has increased rapidly during the past 2 years.

PECAN

PECAN CARPENTER WORM (Cossula magnifica Stkr.)

South Carolina. F. Sherman (April 20): We have received several reports of damage to pecan.

FILBERT

FILBERT BUD MITE (Eriophyes avellanae Nal.)

Connecticut. E. P. Felt (April 23): The filbert mite continues to be abundant in a planting at North Stamford, blasting possibly 25 percent of the buds.

CITRUS

CITRUS WHITEFLY (Dialeurodes citri Riley & Howard)

Florida. W. W. Yothers and M. R. Osburn (March): Observations on citrus insects were made following the freeze of December 12 and 13, when the temperature fell to 22° F. Living pupae of the whitefly were found in large numbers, both on the trees and on the ground, indicating that the direct effect of the freeze amounted to very little, except to deprive the insects of their normal food supply by defoliation.

FLORIDA RED SCALE (Chrysomphalus aonidum L.)

Florida. W. W. Yothers and M. R. Osburn (March): About 30 percent of the adult females of the red scale on grapefruit were still living, whereas

only 5.6 percent were living on grapefruit foliage. This agrees with similar observations made following the freeze of 1917, when 6 percent survived on camphor foliage.

PURPLE SCALE (Lepidosaphes beckii Newm.)

Florida. W. W. Yothers and M. R. Osburn (March): The purple scale appeared to be more resistant than the red scale, the survival of adult females being about 72 percent in the same situations where the observations on red scale were made. Generally, all immature stages of both species of scale were frozen.

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Arizona. C. D. Lebert (January to April 23): Thirty-seven small infestations found in the Phoenix area have apparently been eradicated.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Arizona. C. D. Lebert (April): The cottony-cushion scale is occurring on several citrus plantings in the Phoenix area. Numerous complaints have been received. The seriousness of this pest is entirely offset by the timely appearance of many of the Australian ladybird beetles (Rodolia cardinalis Muls.). These predators are apparently living up to their reputations as outstanding examples of biological control.

GREEN CITRUS APHID (Aphis spiraecola Patch)

Florida. J. R. Watson (April 23): The citrus aphid has increased very rapidly and is now very abundant on young growth of citrus. In most cases this is too late to do serious damage to trees or the coming crop.

Mississippi. C. Lyle and assistants (April 2): This aphid is very abundant on spirea at Coldwater.

CITRUS RUST MITE (Phyllocotes oleivorus Ashm.)

Florida. W. W. Yothers and M. R. Osburn (March): Observations following the freeze of December 12 and 13, when the temperature dropped to 22° F., show that the low temperatures apparently did not reduce greatly the number of rust mites.

AVOCADO

CITRUS ROOT WEEVIL (Pachnaeus litus Germ.)

Florida. J. W. Watson (April 23): Avocado bloom in the vicinity of Miami was attacked by the citrus root weevil and also by Anomala sp.

PAPAYA

PAPAYA FRUIT FLY (Toxotrypana curvicauda Gerst.)

Florida. W. W. Yothers and M. R. Osburn (March): Although the freeze killed to the ground line all papaya plants in central Florida, an examination of injured fruits revealed a number of living larvae of the papaya fruit fly. There was also considerable evidence that several fruits had been infested with larvae, which had left the fruit and gone into the ground to pupate since the cold wave.

TRUCK - CROP INSECTS

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

South Carolina. W. J. Reid and C. O. Bare (January 19 to February 12): Two vegetable growers at Charleston brought to our attention infestations of this insect feeding on carrot foliage. In one field carrot tops were damaged from 5 to 10 percent over an area of approximately 2 acres. The larvae also were found feeding on turnips in an adjoining field. This is the first record of the occurrence of this insect in the coastal-plain area of South Carolina. (Det. by L. L. Buchanan.)

Florida. J. R. Watson (April 23): The vegetable weevil was sent in from River Junction, Gadsden County, where it was reported to be seriously damaging tomatoes.

Alabama. J. M. Robinson (April 20): The vegetable weevil has been abundant on turnips during the winter and the adults are attacking the tomato plants, carrots, and cabbage over the southern two-thirds of the State.

Mississippi. C. Lyle and assistants (April 23): Injury to tomatoes and other vegetables in Copiah and Lincoln Counties has been reported. A correspondent at Mendenhall sent specimens to this office, stating that they were eating her tomato plants.

CUCUMBER BEETLES (Diabrotica spp.)

Tennessee. G. M. Bentley (April 24): The spotted cucumber beetle (D. duodecimpunctata Fab.) and the striped cucumber beetle (D. vittata Fab.) are moderately abundant.

Alabama. J. M. Robinson (April 20): The twelve-spotted cucumber beetle is moderately abundant at Auburn.

Mississippi. C. Lyle and assistants (April 23): Damage to vegetables by cucumber beetles was observed in Copiah and Lincoln Counties and to roses in Hinds County. The larvae of these beetles are causing very severe damage to tomato, cucumber, and watermelon plants in Stone, Forrest, and Jones Counties, one-third of the stand being destroyed in some fields.

Louisiana. C. E. Smith and P. K. Harrison (April 1): On the experimental plots at Baton Rouge, larvae of the spotted cucumber beetle were observed feeding on leaves of cabbage that had been covered with soil during cultivation.

Oregon. B. G. Thompson (April 13): Adults of the western spotted cucumber beetle (D. soror Lec.) were beginning to fly at Corvallis.

FLEA BEETLES (Halticinae)

Mississippi. C. Lyle and assistants (April 23): Flea beetles were causing quite a bit of damage to turnips at Moss Point. Heavy damage to tomatoes, evidently caused by flea beetles, at Crystal Springs was reported.

A FLOWER THRIPS (Frankliniella cephalica Cwfd.)

Florida. J. R. Watson (April 23): Florida flower thrips has been increasing rapidly during the month, owing to the hot, dry weather. It has been very abundant on late bloom of citrus, but was too late to do much damage. It was quite injurious to beans in Alachua and Marion Counties, first attacking the leaves, but largely migrating to the blossoms when they appeared with the resultant shortening of the crop. They also destroyed the blooms and shortened the tomato crop in Marion and Hardee Counties.

ONION THRIPS (Thrips tabaci Lind.)

Florida. J. R. Watson (April 23): The onion thrips has been very destructive to celery and beans in the Sarasota and Belle Glade sections. In the latter section they started on English peas, from which they spread to beans, doing very decided damage.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Lepidotarsa decemlineata Say)

New York. N. Y. State Coll. Agr. News Letter (April 15): H. H. Campbell, Nassau County, observed Colorado potato beetles emerging from soil on April 11.

South Carolina. W. C. Nettles (April 20): Potato beetles are more numerous than usual in the eastern trucking area.

Florida. J. R. Watson (April 23): The Colorado potato beetle was brought in from the southern part of Alachua County.

Tennessee. G. M. Bentley (April 24): The Colorado potato beetle is moderately abundant.

Alabama. J. M. Robinson (April 20): Moderately abundant.

O. T. Deen (April 10): The Colorado potato beetle was feeding more seriously in Baldwin County this year than for several years past. Most of the farmers have dusted or sprayed at least twice.

Mississippi. C. Lyle and assistants (April 23): Colorado potato beetles are now generally present in practically all parts of the State.

TOMATO PINWORM (*Gnorimoschema lycoopersicella* Busck)

Delaware. L. A. Stearns (April 11): The single infestation in the State, in a greenhouse near Wilmington, has been eradicated by rotation of crops.

California. J. C. Elmore (March): Infestations by the tomato pinworm were observed as early as the middle of March in the early fields of tomatoes of the upland tomato-growing areas of Orange and San Diego Counties. (April 5): At San Juan Capistrano 21 plants were examined and 7 were infested. There were from one to three larvae per plant, a heavy infestation for this date.

BEET ARMYWORM (*Laphygma exigua* Hbn.)

California. J. C. Elmore (April 5): About half of the tomato plants examined on upland near San Juan Capistrano were infested with larvae of the sugarbeet armyworm.

ALFALFA LOOPER (*Autographa californica* Spever)

California. J. C. Elmore (March 21-27): Adults of the alfalfa looper were collected from tomato piles on upland areas near Santa Ana.

APHIDS (Aphididae)

Florida. J. R. Watson (April 23): A very heavy infestation of the green peach aphid (*Myzus persicae* Sulz.) occurred on potatoes in the Hastings section.

California. J. C. Elmore (April 5): Aphids were numerous on early tomatoes on upland at San Juan Capistrano. Treatment was necessary.

LEAF-FOOTED BUG (*Leptoglossus phyllopus* L.)

Texas. F. L. Thomas (April 2): Leaf-footed bugs appeared practically overnight at Houston after a good rain. They are working on the tops and tender parts of potato plants.

BEANS

MEXICAN BEAN BEETLE (*Epilachna corrupta* Muls.)

Delaware. L. A. Stearns (April 15): Seventy-five percent mortality in hibernation cages at Newark.

Georgia. T. L. Bissell (April 22): The first Mexican bean beetle of the season was found on snap beans today at Experiment. In 1934 the first beetle was found on May 11.

Ohio. N. F. Howard (April 23): The survival of the Mexican bean beetle in hibernation cages at Columbus is the lowest for several years.

Mississippi. E. W. Dunnam (April 25): A single specimen of the Mexican bean beetle was found feeding on garden beans at Leland.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

South Carolina. W. C. Nettles (April 20): Bean leaf beetles were reported by truckers in the eastern part of the State.

Georgia. O. I. Snapp (April 11): The bean leaf beetle has caused considerable damage to the bean crop around Fort Valley. It is abundant and a number of complaints have been received.

T. L. Bissell (April 22): Bean leaf beetles and feeding holes are numerous on snap beans at Experiment.

Mississippi. C. Lyle and assistants (April 23): The bean leaf beetle was causing trouble in Greene, George, and Jackson Counties as early as March 30. Injury in Hattiesburg and vicinity, Forrest County, was observed later.

E. W. Dunnam (April 8): Bean leaf beetles were noted injuring the foliage of young beans in Washington County.

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

Alabama. J. M. Robinson (April 20): The belted bean beetle is scarce.

Texas. J. N. Roney (March 1): Adults are feeding on onions, turnips, radishes, cabbage, and mustard at Dickinson.

California. J. C. Elmore (March 27): Adults of this cucumber beetle are common on weeds surrounding early bean fields in Peter's Canyon, Santa Ana.

PEAS

PEA APHID (Illinoia pisi Kalt.)

South Carolina. M. B. Stevenson (April 20): Severe damage to garden peas observed in Orangeburg County.

Mississippi. C. Lyle (April 23): Heavy infestations of the pea aphid on English peas were reported recently from Carroll, Humphreys, Copiah, and Leflore Counties.

California. E. C. Essig (April 24): The pea aphid is quite abundant in the Milpitas pea-growing district, where considerable damage is being caused to extensive plantings.

CABBAGE

CABBAGE INSECTS (Lepidoptera)

South Carolina. W. J. Reid and C. O. Bare (April 20): The cabbage looper (Autographa brassicae Riley), the imported cabbage worm (Ascia rapae L.), and the diamond-back moth (Plutella maculipennis Curt.), the three species of cabbage worms most common in the vicinity of the South Carolina Truck Experiment Station at Charleston, have been much less abundant this spring than usual. This is probably due to the unusually cold weather of the past winter. The total infestation to date on heading cabbage in an experimental planting has not equaled 0.5 worm per plant. The order of abundance, from least to most, is as listed above.

IMPORTED CABBAGE WORM (Ascia rapae L.)

Pennsylvania. H. E. Hodgkiss (April): Adults of the imported cabbage butterfly were seen in Adams County on April 16 and in Centre County on April 20.

Ohio. N. F. Howard (April 23): An adult was observed in flight at Marietta on March 24 and another at Columbus on April 4.

Tennessee. G. M. Bentley (April 24): The cabbage butterfly is very common.

Mississippi. C. Lyle and assistants (April 27): Injury to cabbage, ranging from medium to severe, has been reported in the trucking sections of Lincoln, Neshoba, and Copiah Counties for the last several weeks.

Louisiana. W. E. Hinds (April 27): Eggs have been found on cabbage and collards since about the middle of February but have not been as abundant as usual.

Missouri. L. Haseman (April 23): On warm days during the month imported cabbage butterflies have been observed in small numbers at Columbia.

SOUTHERN CABBAGE WORM (Ascia protodice B. & L.)

Missouri. L. Haseman (April 23): At Columbia the native cabbage butterfly is more abundant than the imported species.

Texas. F. L. Thomas (April 5): Several larvae two-thirds grown were found on Japanese turnip at College Station.

DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

Texas. J. N. Roney (March 6): Adults of the diamond-back moth were observed

in turnips at Dickinson and Sugar Land.

Utah. G. F. Knowlton (April 20): Adults are very abundant in some parts of Weber County, and moderately abundant in parts of Box Elder, Cache, and Davis Counties.

Arizona. K. B. McKinney (March): Larvae of the diamond-back moth are very abundant over a wide area of the desert in southern Arizona. They are feeding in large numbers on one of the wild mustards, Lepidium lasiocarpum, in some instances as far as 25 miles from any of the cultivated districts. The larvae were not found on any plants other than mustard.

HARLEQUIN BUG (Murgantia histrionica Hahn)

South Carolina. W. C. Nettles (April 20): Destructive late in March in Kershaw County.

Georgia. T. L. Bissell (April 3): Adult bugs abundant on fruiting collard plants kept for seed at Experiment. About one-fourth of fruit stalks were killed. Bugs beginning to lay eggs.

Alabama. J. M. Robinson (April 20): The harlequin cabbage bug is abundant and active in the central and southern parts of the State.

Mississippi. C. Lyle and assistants (April 23): The harlequin cabbage bug is quite numerous in Monroe County for this time of the year. Heavy infestations of adults and abundant egg masses were observed in Coahoma County in both field and plant beds on April 3. A correspondent in Lincoln County reported them very abundant in his garden.

CABBAGE APHID (Brevicoryne brassicae L.)

Mississippi. C. Lyle and assistants (April 23): Considerable damage by the cabbage aphid has been noted in Lincoln and Copiah Counties during the past month. The aphids were observed in fields and plant beds in Bolivar County on April 3.

ONION

A MITE (Petrobia tritici Ewing)

Texas. S. E. Jones (April 5): Three fields of onions at Encinal are infested. These fields have been in onions continuously for several years. (Det. by H. E. Ewing, who says the mite has been known only as a wheat pest.)

STRAWBERRY

SOWBUGS (Oniscidae)

Alabama. J. M. Robinson (April 20): Strawberries at Auburn are being

attacked by sowbugs.

Mississippi. C. Lyle (April 27): Recent rains have increased damage from pillbugs to strawberries and tender garden plants in the vicinity of State College.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California. J. C. Elmore (April 5): An average of 1 adult was found per foot of seed-bed row on upland near San Juan Capistrano, an unprecedented finding for this time of year. This condition is the result of continued weevil activity in a winter pepper field near the seed bed. Heavy rains prevented plowing the field until spring. Many adult weevils were observed (from 6 to 29 per plant) on pepper plants missed by the disc.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Utah. G. F. Knowlton (April 2): Beet leafhoppers are more abundant than usual in Salt Lake, Tooele, and Utah Counties.

California. W. C. Cook (March 25): The abnormally cold, wet weather has retarded the development of the beet leafhopper in the San Joaquin Valley. Prior to the last week of March only a few nymphs were found, but during this week large populations of nymphs were observed in the Los Banos hills, Big Panoche, and Coalinga.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

Maryland. D. J. Caffrey (May 1): Tobacco growers at Waldorf and Aquasco report serious damage in tobacco plant beds.

South Carolina. W. C. Nettles (April 20): Flea beetles (mainly E. parvula) are injurious in seed beds in the eastern part of the State.

Florida. F. S. Chamberlin (April 10): Very few tobacco flea beetles are present in tobacco beds or newly set tobacco plants in Gadsden County.

Tennessee. G. M. Bentley (April 24): The tobacco flea beetle is moderately abundant.

F O R E S T A N D S H A D E - T R E E I N S E C T S

CANKER WORMS (*Geometridae*)

Connecticut. W. E. Britton (April 23): Eggs of fall canker worms (*Alsophila pometaria* Harr.) are extremely abundant on deciduous trees in southern and southwestern parts of the State and another canker worm season is expected. Eggs have not hatched as yet but a few warm days will bring them out.

California. S. Lockwood (April 23): Canker worms were found in two prune orchards in Sonoma. The larvae were half grown at the time, and considerable defoliation had occurred.

BROWN-TAIL MOTH (*Nygmia phaeorrhoea* Don.)

Massachusetts. L. H. Worthley (March): The extremely cold weather of a year ago was responsible for the reduction in infestations. However, in locations where the webs were on low-hanging bushes near stone walls, the drifted snow protected the webs and the caterpillars survived. Recently the district inspector at Amherst found 75 brown-tail webs, containing living larvae, on one apple tree.

HALF-WINGED GEOMETER (*Phigalia titea* Cram.)

Massachusetts. J. V. Schaffner, Jr. (April 19): In the hardwood forests of the eastern part of Massachusetts, moths of this species seem to be unusually common this spring.

FOREST TENT CATERPILLAR (*Malacosoma disstria* Hbn.)

New Hampshire. L. H. Worthley (April 22): An outbreak of forest tent caterpillars is expected in the Keene area, where 600,000 egg clusters were collected by school children in 3 weeks' time. At Walpole, last summer, most of the large shade trees were completely defoliated in the village section and apple orchards suffered heavy damage.

Vermont. L. H. Worthley (April 22): At a nursery in Putney numerous egg clusters of the forest tent caterpillar were removed from shipments of stock offered for inspection.

Mississippi. C. Lyle and assistants (April 23): An unusually heavy infestation of the forest tent caterpillar has occurred this month in the coast counties. The caterpillars occur principally on oak trees, but are also found on sweetgum, pecan, and other trees. A number of rosebushes have been defoliated.

ASH

BANDED ASH BORER (*Neoclytus caprea* Say)

Nebraska. M. H. Swenk (April 20): The banded ash borer was reported on aging ash trees in Knox County.

ELM

ELM SCURFY SCALE (Chionaspis americana Johns.)

Maryland. E. N. Cory (April 26): Reported attacking elm at Chestertown.

ELM BORER (Saperda tridentata Oliv.)

Nebraska. M. H. Swenk (April 20): Reports of the elm borer working in elm trees were received from Chase, Logan, and Cass Counties from March 26 to April 17.

FIR

AN APHID (Dreyfusia piceae Ratz.)

New England. H. J. MacAloney (March): An examination was made of several areas in New Hampshire and northern Massachusetts, where infestations of the balsam woolly bark louse had been previously found. The winter has been favorable for the successful hibernation of the bark lice, and the survival is perhaps heavier than last year.

HEMLOCK

A BARK BORER (Melanophila fulvoguttata Harr.)

Vermont. H. L. Bailey (April 25): Serious damage by the spotted hemlock borer reported at Basin Harbor and Ferrisburg.

HICKORY

A HICKORY GALL APHID (Phylloxera sp.)

Texas. F. L. Thomas (April 1): Serious injury of hickory is expected because of the abundance of Phylloxera sp., at Henderson.

JUNIPER

JUNIPER WEBWORM (Dichomeris marginellus Fab.)

Ohio. J. S. Houser (April 16): Causing damage to nursery stock, especially Irish juniper, in Strongsville.

LARCH

LARCH CASE BEARER (Coleophora laricella Hbn.)

Massachusetts. J. V. Schaffner, Jr. (April 19): Counts of the hibernating larvae and dissections of sample collections from observation plots in New England and northern New York indicate that the present infestation is fully as serious as in 1934.

New York. R. E. Horsey (April 23): A number of overwintering cases of the

larch case bearer were found on American larch at Rochester, and a severe infestation on a large planting of young larch trees was reported. The twigs were said to be "fringed" with the overwintering cases.

MAPLE:

JAPANESE MAPLE SCALE (Leucaspis japonica Ckll.)

Connecticut. R. B. Friend (April 23): This scale is abundant on a row of Norway maple street trees in New Haven.

New York. E. P. Felt (April 23): The Japanese scale is somewhat abundant at Lawrence, L. I., and generally present at Freeport, L. I., although in both localities the numbers of the scales appear to have been greatly reduced by the extreme cold of the winter of 1933-34.

OAK

WATER-OAK SCALE (Lecanium quercifex Fitch)

South Carolina. J. A. Berly (April 20): Observed in abundance on oak in many places over the State.

Georgia. T. L. Bissell (April 11): All water oaks in McDonough appear to be infested. (Det. H. Morrison.)

HORNED OAK GALL (Andricus cornigerus O. S.)

Mississippi. C. Lyle (April 23): A heavy infestation of galls caused by A. cornigerus was found on water-oak trees at Kosciusko on March 30.

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Northeastern United States. J. V. Schaffner, Jr. (April 19): The severe cold in the winter of 1933-34 caused a tremendous mortality of the European pine shoot moth in southern New England and New York, almost exterminating the pest in some plantings in eastern Massachusetts. However, it has been found that on low-growing pines, especially Pinus montana mughus, enough R. buoliana survived to build up considerable infestations in several localities. Collections taken this spring from mugho pine have shown a mortality from all causes other than parasitization of 21 percent at Lynn, Mass., and of 22 percent at Belmont, Mass., while collections on red pine from southern Connecticut and Long Island, N. Y., have shown mortalities ranging from 27 to 79 percent.

A BARK APHID (Aphiidae)

North Carolina. R. W. Leiby (March 13): A bark aphid is present on white pine in average numbers and is the source of some complaint in Biltmore, a suburb of Asheville.

SCOTCH PINE LECANIUM (Toumeyella numismaticum Pettit & McDaniel)

Michigan. E. I. McDaniel (April 30): Today we received a specimen from Marion, where it was infesting Jack pine. This is one of the first records that we have had of this species on wild trees.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Pennsylvania. E. P. Felt (April 23): The pine needle scale was found in small numbers on hemlock from the Philadelphia area. This insect is rather common, and occasionally occurs in great abundance on various pines, especially the Austrian pine. The scale was abundant on a small Colorado blue spruce from Denver, Colo.

TULIP TREE

TULIP TREE SCALE (Toumeyella liriodendri Gmel.)

North Carolina. R. W. Leiby (March 13): A few complaints concerning this insect indicate severe injury in places near Scotland Neck.

I N S E C T S A F F E C T I N G G R E E N H O U S E

A N D O R N A M E N T A L P L A N T S

A CHIRONOMID (Spaniotoma sp.)

Michigan. E. I. McDaniel (April 11): On March 21 a greenhouse man in the vicinity of Detroit brought a quantity of radishes grown under glass into the laboratory for examination. They were badly scarred by the work of a maggot, belonging to the genus Spaniotoma, probably stercoraria DeG. This is the first time this species has been reported doing damage to crops grown under glass in Michigan. (Det. A. Stone.)

CUBAN-LAUREL THRIPS (Gynaikothrips uzeli Zimm.)

Florida. J. R. Watson (April 23): The Cuban-laurel thrips has been very destructive on one estate at Bocagrande.

TWO-MARKED TREE HOPPER (Enchenopa binotata Say)

Connecticut. E. P. Felt (April 23): The two-spotted tree hopper attracted notice in Redding, through the numerous waxy coverings over areas where eggs had been deposited on ornamentals.

WHITEFLIES (Aleurodidae)

Mississippi. C. Lyle and assistants (April 23): Very heavy infestations of whiteflies on ornamental plants were observed recently at Jackson, Morton, Magee, and Piney Woods.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Kentucky. W. A. Price (April 26): The oyster-shell scale is more abundant than usual.

Minnesota. A. G. Ruggles (April 22): Oyster-shell scale abundant in neglected orchards and on cotoneaster hedges wherever these are grown in the State.

ARBORVITAE

ARBORVITAE APHID (Dilachnus thujaefilina Del Guer.)

Mississippi. C. Lyle and assistants (April 23): The heaviest infestation of aphids, probably D. thujaefilina, on arborvitae in years is reported at Aberdeen. General infestations occurring in other parts of the State have been reported.

Oklahoma. F. A. Fenton (April 23): The usual amount of damage caused to arborvitae is being noticed.

AZALEA

LACEBUGS (Tingididae)

Mississippi. C. Lyle (April 23): Undetermined species of lacebugs were heavily infesting azaleas at Columbus on March 30.

CAMELLIA

SCALE INSECTS (Coccidae)

Mississippi. C. Lyle and assistants (April 23): Fiorinia theae Green and Lepidosaphes camelliae Hoke were reported as moderately abundant on Camellia japonica plants in Jackson. Serious injury to this plant at Aberdeen was also reported.

DEODAR

DEODAR WEEVIL (Pissodes deodarae Hopk.)

Mississippi. C. Lyle (April 23): Serious damage by the larvae was found on Cedrus deodara twigs received from Waynesboro on April 1.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

Florida. J. R. Watson (April 23): The gladiolus thrips increased in numbers and reached serious proportions in several sections of the State.

HOLLY

HOLLY LEAF MINER (Phytomyza ilicis Curt.)

New York and Pennsylvania. E. P. Felt (April 23): The holly leaf miner was found to be rather abundant on a number of trees near Philadelphia, Pa., and also at Locust Valley, N. Y.

Mary K. Peters (April 23): The holly leaf miner has damaged holly leaves on Long Island.

OLEANDER

OLEANDER APHID (Aphis nerii Fonscol.)

Florida. J. R. Watson (April 23): The oleander aphid has been very abundant on new sprouts.

PRIVET

A SCALE INSECT (Parlatoria oleae Colv.)

California. E. O. Essig (April 24): I have received some splendid specimens from Fresno, where they were taken from California privet.

ROSE

ROSE APHID (Macrosiphum rosae L.)

Tennessee. G. M. Bentley (April 24): Aphids are moderately abundant on roses.

Kansas. H. R. Bryson (April 27): New growths of roses are becoming infested with aphids. The usual population of lacewings and ladybeetles is found associated with aphid infestations.

SUMAC

SUMAC BEETLE (Blepharida rhois Forst.)

Florida. J. R. Watson (April 23): The sumac beetle was quite injurious to Brazilian pepper (Schinus) in the southern part of the State.

YUCCA

A YUCCA MOTH (Tegeticula sp.)

Utah. G. F. Knowlton (April 5): Yucca moths have been seriously damaging yucca seed pods (desired for roadside planting) in the Kanab-Mount Carmel area.

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

A MOSQUITO (Aedes cantator Coq.)

Delaware. L. A. Stearns (April 23): Abundance of half-mature larvae observed in salt marsh areas about Rehoboth Bay, Sussex County.

BOXELDER BUG (Leptocoris trivittatus Say)

Michigan. E. I. McDaniel (April 11): The boxelder bug has been increasing in numbers in Michigan for the last 3 years. From the first of January to the 10th of April complaints have been received from many localities.

Iowa. C. J. Drake (April 27): Boxelder bugs are being reported from all over the State.

Nebraska. M. H. Swenk (April 20): Reports of boxelder bugs were received from Howard and Pierce Counties on March 22 and March 27, respectively.

Utah. G. F. Knowlton (April 2): Boxelder bugs are very annoying at an electric power plant in Logan Canyon.

SAND FLIES (Chironomidae)

Mississippi. C. Lyle and assistants (April 23): Sand flies are very abundant and annoying in sections of Pascagoula and Moss Point.

Missouri. L. Haseman (April 23): An epidemic of a fair-sized species of punky has been annoying livestock and man at Columbia.

BLACK WIDOW SPIDER (Latrodectus mactans Fab.)

Louisiana. H. A. Jaynes (March 28): A spider was collected on the gang-plank of a boat at Houma, and was determined as the black widow.

Missouri. L. Haseman (April 23): The first specimen of the black widow spider, a full-grown female, was brought to the office on April 22.

Nebraska. M. H. Swenk (April 20): Inquiries or reports of black widow spiders came from Harlan and Webster Counties on March 31 and April 2, respectively.

Utah. G. F. Knowlton (April 20): Black widow spiders have recently been picked up at Kaysville, Layton, Logan, Clearfield, Farmington, and Ogden. They appear to be fairly abundant in these localities.

AMERICAN DOG TICK (Dermaeontor variabilis Say)

Maryland and Virginia. F. C. Bishopp (April 30): Reports indicate that this tick is quite abundant in the District of Columbia and nearby Maryland and Virginia. Some dogs are said to carry as many as 50 ticks. The pest began to appear early in April and increased markedly toward the end of the month.

CATTLE

SCREW WORMS (Cochliomyia spp.)

Georgia. E. C. Cushing (May 1): R. A. Roberts, of the Savannah laboratory, reports that screw worm cases are of frequent occurrence in the southern counties. Counties in the vicinity of Savannah reported two such cases each. Infestations are appearing as far north as Fulton and McDuffie Counties. The laboratory is receiving an increasing number of requests daily from county agents and stockmen for materials to treat cases.

Florida. E. C. Cushing (May 1): W. V. King states that replies received from 22 county agents in north-central Florida from April 11 to 15 indicate an increasing number of cases in 15 counties and a rapid increase in 2 others. Infestations are occurring in central Florida in areas uninfested last year. Many cases were reported from southwestern counties during the last 10 days of April. There is every indication that the number of cases will show a rapid increase in the northern counties during May. Later reports indicate that serious trouble is developing in Highlands and Osceola Counties.

Texas. E. C. Cushing (May 1): At Sonora it has been reported that screw worm flies have been rapidly increasing since the first of April, notwithstanding the continued dry weather.

D. C. Parmen (April 30): A great many screw worm cases were reported around Uvalde late in March and early in April, but the cool weather later in April checked the pest. There are now about three cases per 1,000 head in sheep and one per 1,000 head in cattle.

HORN FLY (Haematobia irritans L.)

Mississippi. C. Lyle (April 23): Inspector F. A. Smith reports that the horn fly was very abundant at Courtland on April 18.

Missouri. L. Haseman (April 22): As yet horn flies have not appeared in any numbers on cattle.

Kansas. H. R. Bryson (April 27): E. G. Kelly reported the horn fly as attacking cattle for the first time this year on April 5 in Clay County and on April 4 in Washington County.

STABLE FLY (Stomoxys calcitrans L.)

Missouri. L. Haseman (April 22): As yet stable flies have not appeared in any numbers on cattle.

Kansas. H. R. Bryson (April 27): E. G. Kelly reported the stable fly as attacking cattle for the first time this year on April 4 in Washington County, and on April 5 in Clay County.

CATTLE GRUBS (Hypoderma spp.)

Missouri. L. Haseman (April 22): Apparently all grubs have left the backs of cattle.

Mississippi. C. Lyle (April 23): Inspector F. A. Smith reported that ox warbles (H. lineatum DeVill.) were causing considerable annoyance to cattle at Coldwater on April 2.

SHORT-NOSED CATTLE LOUSE (Haematopinus eurysternus Nitz.)

Kansas. E. G. Kelly (April 27): On April 4 the short-nosed ox louse was very abundant and doing much damage to six herds of cattle examined in Clay County.

EAR TICK (Ornithodoros megnini Duges)

Kansas. H. R. Bryson (April 27): On April 1 the spinose ear tick was reported in one herd of cattle at Tescott. Some cows in this herd were brought to Ottawa County from Wallace County in 1930. E. G. Kelly previously reported finding these ticks in considerable numbers in Wallace County.

Texas. O. G. Babcock (April): The spinose ear tick is more abundant than usual and is causing considerable damage to livestock, especially in the areas south of Sonora.

HORSES

A BUFFALO GNAT (Eusimulium pecuarum Riley)

Mississippi. C. Lyle and assistants (April 23): Buffalo gnats were observed near Drew, in Sunflower County, on March 30 and at Savage, Tate County, on April 18. The gnats were very annoying to mules, sheep, and other animals at Moss Point, Jackson County, on March 26 and quite numerous at Neely, in Greene County, on April 13. Both are new areas for the gnats in Mississippi.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

TERMITES (Reticulitermes spp.)

- New Hampshire. L. C. Glover (April 23): On April 16 the common termite R. flavipes Kol. was swarming in one of the buildings in Durham.
- Connecticut. M. P. Zappe (April 22): Termites are either more abundant than ever before or people are becoming more conscious of their presence. We have had about 25 complaints since January 1.
- New York. Mary K. Peters (April 23): There is a serious infestation of termites on Long Island. I am receiving complaints almost every day.
- Pennsylvania. T. L. Guyton (April 23): Reports of the occurrence of termites in the Philadelphia district are rather numerous.
- Delaware. L. A. Stearns (April): Frequent reports of damage were received from various localities.
- Maryland. E. N. Cory (April 26): Infestations in houses.
- Georgia. O. I. Snapp (April 6): Termites are about as abundant as usual in Fort Valley, in buildings. They were swarming on April 6, and the usual complaints are coming in.
- Ohio. T. H. Parks (April 24): Termites are very abundant and we receive many calls each week asking for methods of control.
- N. F. Howard (April 23): Swarms of winged termites have been observed in Columbus for the past 2 weeks. On April 20 several people observed thousands of these insects at various locations in the northern end of Columbus.
- Illinois. W. P. Flint (April 23): Many reports of damage are being received. In many cases serious injury to buildings occurred before the insects were discovered.
- Michigan. E. I. McDaniel (April 11): The termite situation in Michigan is about the same as it has been for the last 4 or 5 years. However, people are giving it more consideration since the Federal Housing Committee insists that houses be put up termite proof. Complaints of termites have been received from many localities since January 1.
- Iowa. C. J. Drake (April 27): White ants are doing serious damage in the floors and woodwork of buildings in Keokuk and Denmark.
- Missouri. L. Haseman (April 23): An unusual number of colonies of termites were swarming in Columbia during the month.
- Mississippi. E. W. Dunnam (April 5): Termites were reported to be damaging the foundation and floor joists of a residence at Leland.

Nebraska. M. H. Swenk (April 20): A report of termites (R. tibialis Bks.) working at the roots of a tree in Harlan County was received on April 9. On April 17 a report was received from Fillmore County of a residence infested with termites.

Texas. F. L. Thomas (April): Termites were infesting dwellings at Dallas and Fort Worth on April 18. Three houses were infested at Corpus Christi on March 20, and termites were swarming at Hearne on April 4.

ANTS (Formicidae)

Georgia. T. L. Bissell (April 25): Ants are reported as being very troublesome at Newnan in houses and yards; killing strawberry plants by loosening soil from the roots; invading hens' nests and killing hatching chicks; and injuring boxwood at Griffin by loosening soil at the roots.

Louisiana. H. C. Young (March 24): On March 24, a piece of clothing in a hotel at Monroe was literally covered with several thousand fire ants (Solenopsis xyloni McCook). During the night the ants had congregated on the garment and eaten numerous holes in it. A few ants were distributed throughout the room. The manager of the hotel informed me that they had been troubled with ants for several years on the ground floor, and that since last July they have been annoying on the upper floors.

Mississippi. C. Lyle (April 23): Fire ants (S. xyloni) are generally abundant in all sections of the State, being especially noticeable in strawberry fields and in gardens.

M. R. Smith (March 22): On March 22 a correspondent at Pheba sent in winged queens of the fire ant S. xyloni. A correspondent at Columbus wrote of this ant, "they are taking possession of my strawberry, asparagus, and rose patches." (April 21): Carpenter ants of the species Camponotus caryae rasilis Wheeler were found infesting houses at State College, and acrobatic ants, Cremastogaster ashmeadi Mayr, have been giving telephone officials in West Point trouble for a number of years. The ants short circuit telephone wires in rainy weather by removing the rubber insulation from the wires in the terminal boxes, as well as the insulating material back of the porcelain plate. At Starkville the writer saw hundreds of C. laeviuscula var. clara Emery invading an artificial bird nest. Many winged queens of Pheidole sp. were swarming at College Station on March 26.

BROAD-HORNED FLOUR BEETLE (Gnathocerus cornutus Fab.)

Kansas. G. B. Wagner (March): During the month a number of adults, larvae, and pupae of the broad-horned flour beetle were taken from a flour mill in Kansas City. This is the second time this species has been taken in the southwestern milling district. One specimen was taken from a mill in central Kansas in 1932. Data gathered since the insect was found seem to indicate that it came into the mill from some patent flour, very probably returned from an eastern or southern customer.

SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis L.)

California. F. S. Stickney, D. F. Barnes, and Perez Simmons (November):
In November 1934 cucujid beetles were numerous in fallen dates at the Government Date Garden near Indio. Specimens have been identified as the saw-toothed grain beetle. The abundant occurrence out of doors of this pest of stored materials probably has not been recorded before in the United States.

A DERMESTID (Trogoderma tarsalis Melsh.)

Maryland. E. N. Cory (April 26): Several reports have been received of the presence of larvae in houses.

INSECT CONDITIONS IN HAITI FOR MARCH AND APRIL 1935

By
André Audant

Reports from Jacmel and Gonaives indicate that the boll weevil (Anthonomus grandis Boh.) is gradually disappearing from the cotton plantations. In some instances the weevils have punctured the petioles of the bolls. They are apparently going under trash, as the harvest season comes to an end.

The last broods of cotton stainers, Dysdercus spp., are dwindling away in the advanced cotton fields of the Cul de Sac plain.

Citrus whiteflies (Aleurodidae) have been observed in connection with the green scale (Coccus viridus Green) and sooty mold around Petionville.

The onion thrips (Thrips tabaci Lind.) has become quite abundant in gardens of the Port au Prince district.

The first generation of Feltia annexa Treit. has appeared in newly planted fields of potatoes on the Rochelois ridge, attacking tubers at 10 cm below the surface.

Crickets, Gryllus sp., have been observed cutting the tender buds of roses in the vicinity of Port au Prince.

Calpodes ethlius Cram. is severely damaging canna beds in the district of Damien.

INSECT NOTES FROM PUERTO RICO FOR APRIL 1935

G. N. Wolcott reported on April 10, that a serious and destructive outbreak of the onion thrips (Thrips tabaci Lind.) has recently developed and threatens to destroy almost the entire crop on the extensive plantings of onions, made in many parts of the island by the Relief Administration.

Spraying was begun too late to be of much value and an extended drought now eliminates all possibility of control.

Mr. Wolcott also reports that the present drought is responsible for the appearance of the cottony-cushion scale (Icerya purchasi Mask.) in noticeable abundance at various points in the previously infested area, but none of the citrus growers coming to the laboratory for a supply of Rodolia cardinalis Muls. to release in their groves, report a heavy infestation. The scale has spread very little, not yet (April 10) having reached Vega Baja in its westward dispersion.

F. C. Bishopp reported on April 16 that specimens of flies sent to the Bureau by H. L. Van Volkenberg, parasitologist of the Puerto Rico Agricultural Experiment Station at Mayaguez, have been identified as Cochliomyia americana Cushing and Patton. This is the species that has recently caused so much damage to livestock in the Southeastern States. While the fly is known to be present on other islands in the West Indies, this is the first authentic record of its occurrence in Puerto Rico.

INSECT CONDITIONS IN HAWAII FOR MARCH 1935

By

O. C. McBride

Cotton bolls have just reached the stage for infestation by the pink bollworm (Pectinophora gossypiella Saund.). Approximately 90 percent of the bolls are infested, the infestation ranging from one to seven larvae per boll. Parasitization (by 7 species of parasites) is quite low. Cotton from Waianae, Oahu, shows less than 0.5 percent parasitization and from Honolulu about 1 percent.

Although fruits were scarce during March, the abundance of the Mediterranean fruit fly (Ceratitis capitata Wied.) in citrus and mango orchards increased 50 percent over February. Parasitization at this season is very low--approximately 10 percent.

Reports indicate that the melon fly (Bactrocera cucurbitae Coq.) is doing considerable damage to Chinese cucumbers. Growers are trapping and covering fruits for protection.